

## WHAT IS CLAIMED IS:

- 1           1. A socket including a housing, a SD contact, a SD card detect contact, a SD  
2     write protect contact, a SM contact, a SM card detect contact, a SM write protect contact  
3     and a MS contact, wherein  
4           the housing is integrally formed as an insulator and has a first slot and a second  
5     slot by two baffles and walls upright to the baffles, dovetailed holes (131) are defined in  
6     a bottom face defining the second slot, the housing (10) further has a top side (10d)  
7     defining therein a SM terminal hole (14) and two SM protect terminal holes (15,15a),  
8     multiple SM terminal fixing slots (143) are defined in the top side (10d) and composed  
9     of long terminal slots (140) and short terminal slots (141), multiple MS terminal holes  
10    (16) are defined in a bottom side (10c) of the housing (10);  
11           the SD contact includes multiple SD terminals each has a fixed portion (22)  
12    with a hook (23) formed on a side of the SD contact terminal (21) to correspond to a side  
13    face defining dovetailed holes (131) so that after the SD contact terminals (21) are  
14    inserted into the dovetailed slots (130), the hook (23) is able to securely engage with the  
15    side face defining the dovetailed slot (130), each SD contact terminal (21) further has a  
16    wave-patterned contact section (24) formed on a front distal end portion of the SD  
17    contact terminal (21) and a welding portion (25) formed on a rear distal end portion  
18    opposite to the contact section (24);  
19           the SD card detect contact (30) includes a first SD card detect terminal (31) and  
20    a second SD card detect terminal (32), the first SD card detect terminal (31) has a fixed  
21    portion (311) with a hook (310) formed on a side of the fixed portion (311) to  
22    correspond to the first guiding grooves (111) of the housing (10) such that after the first  
23    SD card detect terminal (31) is inserted into the corresponding first guiding grooves

1 (111), the hook (310) of the fixed portion (311) is slid in the first guiding grooves (111),  
2 a resilient contact is formed in the mediate portion of the first SD card detect terminal  
3 (31), a contact (315) is formed on a front distal end portion of the first SD card detect  
4 terminal (31) and a welding portion (317) is formed on a rear distal end portion of the  
5 first SD card detect terminal (31) by bending, the second SD card detect terminal (32)  
6 has a fixed portion (322) with a hook (320) formed on a side of the fixed portion (322) to  
7 correspond to the second guiding grooves (112) to position the second SD card detect  
8 terminal (32) inside the housing and maintain a distance with the first SD card detect  
9 terminal (31), a contact plate (324) is formed on a front distal end portion of the second  
10 SD card detect terminal (32) and a welding portion (326) is formed at a rear distal end  
11 portion of the second SD card detect terminal (32);

12 the SD write protect contact (40) is composed of a first write protect terminal  
13 (41) and a second write protect terminal (42), the first write protect terminal (41) has a  
14 fixed portion (411), a contact plate (413) formed on a front distal end portion thereof and  
15 a welding portion (415) formed on a rear distal end portion thereof, the second write  
16 protect terminal (42) has a fixed portion (422) to correspond to a fourth guiding grooves  
17 (114) in the housing (10) such that after the second write protect terminal (42) is inserted  
18 into the fourth guiding grooves (114), the fixed portion (422) is able to engage with a  
19 side face defining the fourth guiding grooves (114), the second write protect terminal  
20 (42) further has a contact (424) formed on a front distal end portion thereof and a  
21 welding portion (426) formed on a rear distal end portion thereof;

22 the SM contact (50) is composed of multiple SM long terminals (51) and  
23 multiple SM short terminals (52), each of the SM long and short terminals (51,52) has a  
24 fixed portion (53) to correspond to and to be received in the SM terminal fixing slots

1 (143), each of the SM long terminals (51) has an extension (511) extending from the  
2 fixed portion (53), a wave-line contact section (510) extending from the extension (511)  
3 and a welding portion (54) formed on a rear distal end of the fixed portion (53), the SM  
4 short terminals (52) has a wave-like contact section (520) extending directly from the  
5 fixed portion (53) and a welding portion (54') formed on a rear distal end of the fixed  
6 portion (53');

7 the SM card detect contact (60) has a first SM card detect terminal (61)  
8 corresponding to and to be received in the SM terminal hole (14) of the housing (10) and  
9 a second SM card detect terminal (62), the first SM card detect terminal (61) has a  
10 contact plate (610) formed on a mediate portion of the first SM card detect terminal (61)  
11 and a welding portion (611) formed on a rear distal end thereof, the second SM card  
12 detect terminal (62) is received in the SM terminal hole (14) of the housing (10) and on  
13 top of the first SM card detect terminal (61), the second SM card detect terminal (62) has  
14 a contact plate (620) formed on a mediate portion thereof and a welding portion (621) on  
15 a rear distal end thereof;

16 the SM write protect contact (70) includes a SM long write protect terminal (71)  
17 and a SM short write protect terminal (72), both the SM long write protect terminal (71)  
18 and the SM short write protect terminal (72) respectively have a fixed portion (73,74) to  
19 enable the SM long write protect terminal (71) and the SM short write protect terminal  
20 (72) to be riveted on the top side (10d), a contact (75,75a) is formed on a distal end  
21 portion of each of the SM long write protect terminal (71) and the SM short write protect  
22 terminal (72) and able to extend into the SM protect terminal holes (15,15a) in a top side  
23 (10d) of the housing (10), a welding leg (78,79) is formed on another distal end of the  
24 SM long write protect terminal (71) and the SM short write protect terminal (72)

1 respectively;

2 the MS contact (80) includes MS contact terminals (81) each having a fixed  
3 portion (82) to extend into openings (161) of the MS terminal holes (16) and abut side  
4 faces defining dovetailed slots (160) communicating with the openings (161), a contact  
5 (84) is formed on a front distal end portion of the MS contact terminal (81) to extend out  
6 of a corresponding one of the MS terminal holes (16) and a welding portion (85) is  
7 formed on a rear distal end portion of the MS contact terminal (81),

8 whereby the socket for MS card, SD card, MMC card and SM card is formed.

9 2. The socket as claimed in claim 1, wherein a pair of vertical grooves (155,156)  
10 are defined in a side face of the housing to receive therein the welding portions of the SM  
11 long and short terminals.

12 3. The socket as claimed in claim 1, wherein the housing has a positioning block  
13 formed on a rear side of the housing and having grooves defined in side faces thereof to  
14 correspond to and receive therein the welding portions of the SM long and short  
15 terminals.

16 4. The socket as claimed in claim 1, wherein the housing has a T-shaped block  
17 (115) to separate the resilient contact (313) and the contact (315) of the first SD card  
18 detect terminal (31) from the contact plate (324) of the second SD detect terminal (32)  
19 after the first and second SD card detect terminals (31,32) are inserted into the first and  
20 second guiding grooves (111,112).

21 5. The socket as claimed in claim 1, wherein the housing has two recessed areas  
22 (18,18a) to receive therein a fixing plate (182) which has a welding portion (184)  
23 formed on a rear distal end portion of the fixing plate (182).

24 6. The socket as claimed in claim 1, wherein the housing further has a snapping

1 plate hole (19) and a snapping plate seat (191) provided with a fixing groove (193), a  
2 MS snapping plate (90) has a fixed portion (91) to correspond to and to be securely  
3 received in the fixing groove (193) and a snapping contact (93) formed on a front end  
4 portion of the MS snapping plate (90) to be riveted on the snapping plate seat.

5 7. The socket as claimed in claim 1, wherein the housing further has two pairs of  
6 positioning bosses (185,186) may be formed on four corners of the bottom side (10c) of  
7 the housing (10) such that precision is enhanced when the housing (10) is placed on top  
8 of a printed circuit board.

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